SEQUENCE LISTING

<110> NGK Insulators, LTD.

<120> Human housekeeping genes and human tissue-specific genes

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121 agagttctga tggagagata tttgaagttg atgtggaaat tgccaaacaa tctgtgacta
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 121 ctcttggctc tgccaggagc cggagccctg ccaccctggc tttgacgccg agagctacac
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    481 agggggaaat gaaagaatag agaaaactat acggtagtag tcaggatgtg gcggaaccaa
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    661 tcttcatgct ccatctccaa ctgcgcaggt gtgtctgatg cattgattgg ttgccctgca
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    541 gggtagagca ctgaatgtgg aatggcggca tctagctgta ctgactataa tcaaactccg
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481 gacttaacaa tanaaaggat gtatggtttt tatcaactgt cttccagtag ttgcttccta
541 actgcaaggg catctcatta attgagtagc tcttgaaaga gctttgagtt agaaatatgt
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661 ttttgtgaat gaaagttgga tgtca

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     121 cttactcgaa gcctcgattg gccacatttt ggtactacgc caaggttgag ctggttcctc
     181 ccacccctgc tgagatccct agagctattc agagcctgaa aaaaatagtc aatagtgctc
     241 agactggtag cttcaaacag ctcacagtta aggaagctgt gctgaatggt ttggtggcca
     301 ctgaggtgtt gatgtggttt tatgtcggag agattatagg caagcggggc atcattggct
     361 atgatgtttg aagaccaatc tttaacatct gattatattt gatttattat ttgagtgttg
     421 ttggaccatg tgtgatcaga ctgctatctg aataaaataa gatttgtcaa aaaaaaaaaa
     481 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
     541 aaaaaaaaaa aaaaaaagaa aaaaaaaaaa aaaaaaaaaa
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     181 aagaaatctg gcaaaaagta agctgttcct tgtgcctgag gagatggtga ccctttattt
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     361 atcttacagt ggctcatcat ctctttagtt gttttcacta agtcgttcct accataactg
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     481 accctaaact ttgtatcacc tgaaattaaa ccaactcatt tgaacaaaca aaaacaaaaa
     541 caacacaaaa aaaaaacaaa aacaaacaaa acaaaacagg gggtgggcgc ccacaaaaaa
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     661 aggtggcccc atatagggag ggcgcgaata taaaacgaat gccgcagcgg cgagagaggt
     721 acaacaagag cgaggatgag cggggaaaca acacgtacag aaggggaaac ctctgggagg
     781 agagcaaacc cccaccacgc cgcgcggggg cacacacaat tgagggagac caccacacct
     841 cagacaaggc aacataacag cgcccgcacg agcacaaata cacaccgcag cgcgcaacta
     901 gtgagggatc aaccacagcg aatcatatac gcaggacgag aacagactgg accatgaggg
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    1021 ggaccaggag cggacgcgag ccaccagcgc agcaaggcgc gcgatgacca catgtggtaa
    1081 ccccgcgaag cacagaccaa caacgcagat accagaaagc aggaaggcac caaccgagcc
    1141 agctcacacc acgcccgacg ccgcgacaca gcagggcaga ccagcgccga ctacagccgc
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    121 gtaccgccag ctctctgctc tccacagggc tccccgcccc acccggcctg ataaagcgcg
    181 ccgactgggc tacaaggcca agcaaggtta cgttatatat aggattcgtg ttcgccgtgg
    241 tggccgaaaa cgcccagttc ctaagggtgc aacttacggc aagcctgtcc atcatggtgt
    301 taaccagcta aagtttgctc gaagccttca gtcccttgca gaggagcgag ctggacgcca
    361 ctgtggggct ctgagagtcc tgaattctta ctgggttggt gaagattcca catacaaatt
    421 ttttgaggtt atcctcattg atccattcca taaagctatc agaagaaatc ctgacaccca
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    661 tttgtaaaat tcatacttaa taaacaattt aggacagtca tgtctgctta caggtgttat
    721 ttgtctgtta aaactagtct gcagatgttt cttgaatgct ttgtcaaatt aagaaagtta
    781 aagtgcaata atgtttgaag acaataagtg gtggtgtatc ttgtttctaa taagataaac
    841 tttttgtct ttgctttatc ttattaggga gttgtatgtc agtgtataaa acatactgtg
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   1021 ttattttcaa gtggctgcgt tttttttagt ttggcaggtg tagacttttt aagttgggct
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   1321 taaatacctt tcaagtgtga gcttagacgt caaccctaaa atacttaacc gtaatgctaa
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   1441 tcattcttag tccagtcagt cttaaaaaca tcttgggtta cccactctgt ccactcccat
   1501 aggctacaga aaaagtcaca agcgcatggt ttccaaccat atgtgttttc tgcagttatt
   1561 tctcttgttc tggccaaaca accctaaaaa tccttaccat tccacaaagt tggaccatca
   1621 cttgtgcacc cactttgact atgagtatac caccacattg catttctgtt tgcaccatgt
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   1861 gtactcatag caagttcata aaagttcttg agacctaaat ttcttcacaa aaaaagaaaa
   1921 gatcttaagt catacatttt aattgtgtag aggttgttca actgaaggaa taaatgtata
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<212> DNA
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<222> 28..405
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    121 cgcatccatg gagtgggctt caagaagcgt gcacctcggg cactcaaaga gattcggaaa
    181 tttgccatga aggagatggg aactccagat gtgcgcattg acaccaggct caacaaagct
    241 gtctgggcca aaggaataag gaatgtgcca taccgaatcc gtgtgcggct gtccagaaaa
    301 cgtaatgagg atgaagattc accaaataag ctatatactt tggttaccta tgtacctgtt
    361 accactttca aaaatctaca gacagtcaat gtggatgaga actaatcgct gatcgtcaga
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121 tgggctgggg agccggggcg gtgcgattct gccacacgcc acgctctact aggccccctt
181 actcctaatt aattgcctgc tcaccagact gtgagaaaat aattgccact ataaattttc
241 cctcctctgc ataaaatatt cggggaacc agcacttaaa aaacagactt catgaaagaa
301 gggcagcaag gcgtggatgc tgcgcccccc acaaccccca ctgcagagga cacagagagg
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421 ccaggaatgg tcacagctga aaaaaagtcg agtgagtggc tacatgcggc agccgcttgt
481 gttcacctgc cgtccaccca ggacagtccc cggcagcagc ttgtgttcac ctgccctcca
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601 ggctg

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301 agaatcagag gtatcaatgg agtgagccca aaggttcgaa aggtgttgca gcttcttcgc
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421 aggattgtag agccatatat tgcatggggg taccccaatc tgaagtcagt aaatgaacta
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721 ggcaacaggg aggaccagat caacaggctt attagaagaa tgaactaagg tgtctaccat
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<212> DNA
<213> Homo sapiens
<221> CDS
<222> 122..703
<308> GenBank/BC001360
<400> 53
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121 aatggctgcc atccggaaga aactggtgat tgttggtgat ggagcctgtg gaaagacatg
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301 agctgggcag gaagattatg atcgcctgag gcccctctcc tacccagata ccgatgttat
361 actgatgtgt ttttccatcg acagccctga tagtttagaa aacatcccag aaaagtggac

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     481 tcttcggaat gatgagcaca caaggcggga gctagccaag atgaagcagg agccggtgaa
     541 acctgaagaa ggcagagata tggcaaacag gattggcgct tttgggtaca tggagtgttc
     601 agcaaagacc aaagatggag tgagagaggt ttttgaaatg gctacgagag ctgctctgca
     661 agctagacgt gggaagaaaa aatctgggtg ccttgtcttg tgaaaccttg ctgcaagcac
     721 agcccttatg cggttaattt tgaagtgctg tttattaatc ttagtgtatg attactggcc
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     901 tgacactgct ctaacagccc tcctctgcac tcccacctga cacaccaggc gctaattcaa
     961 ggaatttctt aacttcttgc ttctttctag aaagagaaac agttggtaac ttttgtgaat
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    1261 cttaatgtat gttaccaaaa ataaatatat ctaccccaga ctagatgtag tatttttttgt
    1321 ataattggat ttcctaatac tgtcatcctc aaagaaagtg tattggtttt ttaaaaaaga
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<222> 82..537
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     121 cctccggcca gccgggcccc tcagatgaga gctgcaccca ggccagcacc agtcgctcag
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     301 cacacattgg gtcacgccat tactgggggc ttcagtggag gaagtaatgc tgagcctgcg
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     421 tgcctctatg agatcaaaca gtttctggag tgtgcccaga accagggtga catcaagctc
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     601 aatagaattg atagtgaggg tataaagtgt aaccatcagt taaacctctc ctgtcattcc
     661 tagcttcctt gcttcagaat tgaaatggaa gtgggggtgt ccctactctg tagaatctgg
     721 gactgggcaa atgtttgtgt ggcctcctta aactagctgt tatgttatga ttttattctt
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     241 cattcattgt ttacgctgga atttttctcc ccatggaatg taagtaaaac ttaagtgttt
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<213> Homo sapiens
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241 ggaagattcc aggcgttcca gatcaaagtc caggtcccga tctgaatcta ggtctagatc
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    1201 catgcataaa gtttagtgag atgttatatg taagatctga tttgctagtt cttccttgta
    1261 gagttataaa tggaaagatt acactatctg attaatagtt tcttcatact ctgcatataa
    1321 tttgtggctg cagaatattg taatttgttg cacactatgt aacaaaacaa ctgaagatat
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     121 ttgcagacaa ggtcccaaag acagcagaaa attttcgtgc tctgagcact ggagagaaag
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     301 atgagaactt caccctaaag catacgggtc ctggcatctt gtccatggca aatgctggac
     361 ccaacacaaa tggttcccag tttttcatct gcactgccaa gactgagtgg ttggatggca
     421 agcatgtggt gtttggcaaa gtgaaagaag gcatgaatat tgtggaggcc atggagcgct
     481 ttgggtccag gaatggcaag accagcaaga agatcaccat tgctgactgt ggacaactcg
     541 aataagtttg acttgtgttt tatcttaacc accagatcat tccttctgta gctcaggaga
     601 gcacccctcc accccatttg ctcgcagtat cctagaatct ttgtgctctc gctgcagttc
     661 cctttgggtt ccatgttttc cttgttccct cccatgccta gctggattgc agggttaagt
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     121 aaagattcta gctgcctctt aaacgagaca aattttcagc agaggggccc aaaacaaaat
     181 ggtcctagcc ctctgaagta aaaatattta tgggaaaaat cagtttttgt aagaaagaaa
     241 aattaagaat agtctctctc ccaggccata gagcttcctt tgtccaatca ggttggatca
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     421 ctcatttcaa ccccactcag ggcctctctg atgcaatccc aaagttagca gtggcaatgc
     481 aactttcaga ccgggagagc tctgactgcc tgttggatac tcgagtcaca gtccatgggg
     541 tgttttgtta ttggccaatg tctgttaacc attaactctc ttcatgattg caccagttag
     601 accatttgcc ctgatggggg gaaaaagaag aagaaaaaac aaattagaag aaaaaaagtg
     661 acaagagaaa gcaagctgct aatggccgat cccaacacac tttctgggag acagtagatg
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<222> 173..829
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     121 gtgccgggtc agtgttagcc tccagccctg gttgtggaag gcgacagaag tcatggcgat
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     241 tgagaacctg gccaccctgg agcgctatgt agagacgcag gccaaggaaa atgcctatga
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     361 cacggtcacc gcccagatcc tgctgaaggc cctcaccaac ttgccgcaca cagacttcac
     421 cctgtgcaag tgcatgatcg accaggcaca tcaagaagaa cggccaatcc gacagatttt
     481 gtacctcggg gacctgctgg agacctgcca tttccaggcc ttctggaaag ccctggatga
     541 aaacatggac ctcttggaag gtataactgg ctttgaagac tctgtccgaa agtttatctg
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     661 ggatctgtcg gacagccagc taaaggtgtg gatgagcaaa tacggctgga gtgccgacga
     721 gtcggggcag atcttcatct gtagccaaga agagagcatt aaacccaaga acattgtgga
     781 gaagattgac tttgacagtg tgtccagcat catggcctcc tcccagtaac ttcaggtgtt
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    241 aaattttaag aattcttaag tctaagggac ttgctcctga tcttcctgaa gatctctacc
    301 atttaattaa gaaagcagtt gctgttcgaa agcatcttga gaggaacaga aaggataagg
    361 atgctaaatt ccgtctgatt ctaatagaga gccggattca ccgtttggct cgatattata
    421 agaccaagcg agtcctccct cccaattgga aatatgaatc atctacagcc tctgccctgg
    481 tcgcataaat ttgtctgtgt actcaagcaa taaaatgatt gtttaacta


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<212> DNA
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<222> 213..1013
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    181 ccgccgccct tcgaggggcc ccaggccgcg ccatggtgaa ggtgacgttc aactccgctc
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    301 cccccgacgc cgtcgcggtg gactgcaagg acccagatga tgtggtacca gttggccaaa
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    421 taggaggagc atacttgtac aaatattttg cacttcaacc agatgacgtg tactactgtg
    481 gaataaagta catcaaagat gatgtcatct taaatgagcc ctctgcagat gccccagctg
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    721 acacttccat tgttatgcca cccagaaacc tactggagtt acttattaac atcaaggctg
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    841 aaaacattga tcacctgggt ttctttattt atcgactgtg tcatgacaag gaaacttaca
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    961 caattcggca ttttgaaaac aaatttgccg tggaaacttt aatttgttct tgaacagtca
   1021 agaaaaacat tattgaggaa aattaatatc acagcataac cccacccttt acattttgtg
   1081 cagtgattat tttttaaagt cttctttcat gtaagtagca aacagggctt tactatcttt
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<222> 61..288
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    121 aatcatatgg ctgtagcatt cgtgctatcc ctgggggttg cagctttgta taagtttcgt
    181 gtggctgatc aaagaaagaa ggcatacgca gatttctaca gaaactacga tgtcatgaaa
    241 gattttgagg agatgaggaa ggctggtatc tttcagagtg taaagtaatc ttggaatata
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<212> DNA
<213> Homo sapiens
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<222> 95..250
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     121 actcagctac atccgatact cccagatctg tgcaaaagca gtgagagatg cactgaagac
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     241 gaaggaataa tctaccctga ctaaagcttg aaatgctaca tttccaaggt gaagatgtgt
     301 gggcacatgt tatggcagat tgaaaaggat ctcattccat gggaaaaaaa aaaatcctgt
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<222> 111..716
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     121 tcatcggtat ccaaggcccc gactatgttc ttgtcgcctc cgaccgggtg gccgccagca
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     361 cacgccgaaa cctggctgac tgtcttcgga gtcggacccc atatcatgtg aacctcctcc
     421 tggctggcta tgatgagcat gaagggccag cgctgtatta catggactac ctggcagcct
     481 tggccaaggc cccttttgca gcccacggct atggtgcctt cctgactctc agtatcctcg
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     661 acaaaaatgg catccatgac ctggataaca tttccttccc caaacagggc tcctaacatc
     721 atgtcctccc tcccacttgc cagggaactt ttttttgatg ggctccttta ttttttttcta
     781 ctcttttcag gcgcactctt gataaatggt taattcagaa taaaggtgac tatggatata
     841 attgaaaaaa


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<211> 1233
<212> DNA
<213> Homo sapiens
<221> CDS
<222> 182..514
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     121 gagtccctga actctcgctt tctttttaat cccctgcatc ggatcaccgg cgtgccccac
     181 catgtcagac gcagccgtag acaccagctc cgaaatcacc accaaggact taaaggagaa
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1081 cttttttttt cctttttgt ctatgaagtt gctgtttatt ttttttggcc tgtttgatgt
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1201 cagaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa

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121 aagcagtgcc aaatcctcaa taattgcaag tcctgatgag aagtgatctt gtgagaatgc
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361 tccctgggaa attctcttac tctccgatct ttcggtgcta ttggaccatg ttactgtgcc
421 aaagtgtctt aatgcttgtc ccatctatac tcagcttggc cttggaaccc acataggagt
481 tggtggggga gggatgggta gatgggtatt attcattgta tgttgatcca ggtgtgtgta
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<211> 515
<212> DNA
<213> Homo sapiens
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<222> 47..484
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121 gctggacatg tcctacgagc agctgatgca gctgtacagt gcgcgccagc ggcggcggct
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361 ggagatcaag cccgagatga tcggccacta cctgggcgag ttctccatca cctacaagcc
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481 gtaatggctc agctaataaa ggcgcacatg actcc

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<222> 21..590
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     121 ccgttgcagg cctggctgga aaagacccag tacagtgtag ccgtgatgtg gtcatttgtc
     181 ctgatgccag ccttgaagat gcaaaaaaag agggaccata tgatgtggtg gttctaccag
     241 gaggtaatct gggcgcacag aatttatctg agtctgctgc tgtgaaggag atactgaagg
     301 agcaggaaaa ccggaagggc ctgatagccg ccatctgtgc aggtcctact gctctgttgg
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     481 caagccgggg gcctgggacc agcttcgagt ttgcgcttgc aattgttgaa gccctgaatg
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     721 atggaagtca caactacaca gagatttctc agcctacaaa ttgtgtctat acatttctaa
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     841 ag


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<213> Homo sapiens
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     121 agataaacca tgttataagt acttaacaaa cttataaact atttcttcca taacattctc
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     481 gccgggcctg gtgcacaaaa acacaaagga gattagacct gtgtttgcta aaccccagtc
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<213> Homo sapiens
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<222> 106..507
<308> GenBank/NM_001997
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     421 gctaagcggc ggatgcagta caaccggcgc tttgtcaacg ttgtgcccac ctttggcaag
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<213> Homo sapiens
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<222> 96..440
<308> GenBank/AF072098
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     121 gccacgatga gatgttctcc gacatctaca agatccggga gatcgcggac gggttgtgcc
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     361 gaagggcagc aaaatcagga aaagggtgca tgaacaaaat gaaaatatca acaaagagaa
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